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AUTHOR Stufflebeam, Daniel L.
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ABSTRACT

This is a proposal submitted by the Ohio State University Research Foundation for design of a planning and assessment system for the Division of Manpower and Institutions (now Division of Research and Development Resources), U.S. Office of Education. It responds to a need for an expanded planning, management, and assessment system that would enable DMI leaders to make responsible decisions under its new institutional support policy. The proposal suggests a background study; the convening of two advocate teams to develop alternative evaluation strategies; a convergence team to review the competing strategies and generate a third, which could be an elaboration of one of the advocate team strategies, a merging of the best features of the two, or a completely new strategy; and a means for judging the competing strategies. (Author)

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DESIGN OF A PLANNING AND ASSESSMENT SYSTEM FOR THE DIVISION OF MANPOWER AND INSTITUTIONS

Submitted by:

The Ohio State University
Research Foundation
Columbus, Ohio

TM 001 320

Title: DESIGN OF A PLANNING AND ASSESSMENT SYSTEM FOR THE DIVISION OF MANPOWER AND INSTITUTIONS

Applicant Organization:

THE OHIO STATE UNIVERSITY RESEARCH FOUNDATION
1314 Kinnear Road
Columbus, Ohio 43212

Initiator and
Project Director:

Daniel L. Stufflebeam, Professor and Director, Evaluation Center
The Ohio State University
1712 Neil Avenue
Columbus, Ohio 43210
614-422-1231

Transmitted by:

Louis D. Higgs, Deputy Executive Director
The Ohio State University Research Foundation
1314 Kinnear Road
Columbus, Ohio 43212
614-422-6129

Date Transmitted: June 18, 1971

Background

The United States Office of Education, through the Division of Manpower and Institutions, currently supports 27 educational R & D institutions with an annual budget of approximately $34 million. Because the research-development-field testing-dissemination sequence, around which many of the institutions build their programs, calls for progressively larger budgets, DMI has found it necessary, in a period of level funding, to withdraw support from some of the weaker institutions in order to maintain a minimum level of support in other, stronger institutions.

A new support policy has emerged which is designed to reverse the trend toward attrition and to provide for needed new institutions and programs. Details of this new policy are provided in the attached document: DMI Institutional Support Policy (Frye, June 3, 1971).

The new policy proposes a maturity model of educational R & D institutions whose chief features are summarized in Figure 1.

The new model specifies 10 clusters of decisions which must be made by DMI leaders. These are indicated in Figure 1 by the numbers enclosed in parentheses. The key questions in each decision cluster are as follows:

Pre-Institutional Phase

(1) Should given requests for planning grants for new institutions be funded?

(2) Should given proposals to start new institutions be funded?

Phase I (new institutions)

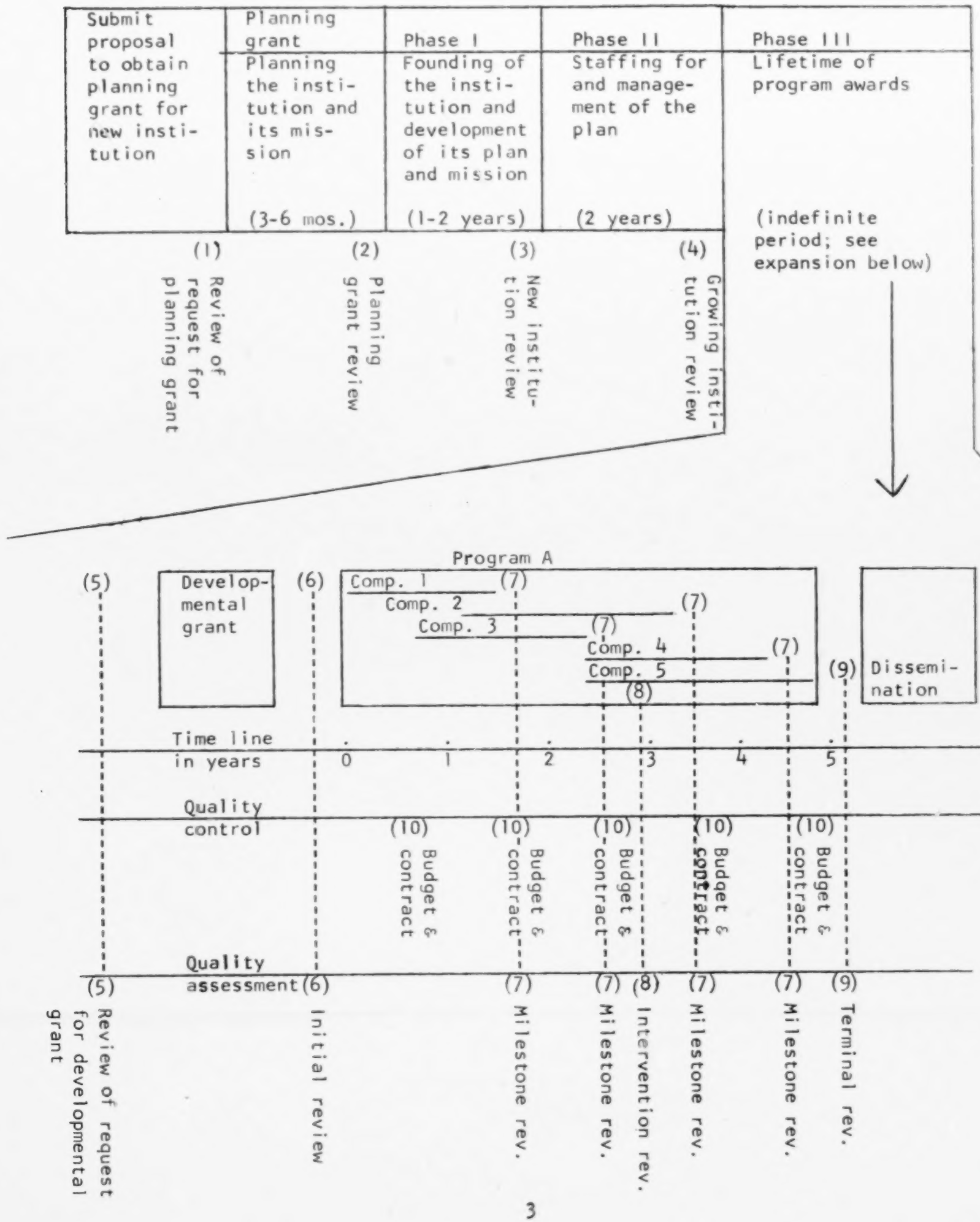
(3) At the end of this phase, is the basic program plan of a given institution satisfactory?

Phase II (developing institutions)

(4) At the end of this phase, is the capability of the institution to manage its basic program plan satisfactory?

FIGURE 1

STAGES AND EVENTS OF INSTITUTIONAL GROWTH IN THE MATURITY MODEL



Phase III (mature institutions)

(5) Should given developmental grant proposals (for new program plans) be funded?

(6) Should the Office of Education commit itself to support given proposed new program plans?

(7) Are significant milestones in the program plans being reached? on time? with satisfactory quality?

(8) Did the program reach its objectives?

(Answers to this question, of course, have significance beyond the information needs of DMI, e.g., OPE, NCEC, and others.

(9) Do current circumstances of the programs or institution require redirection or changes in Office of Education support?

(10) With given funds each year, how should the program be adjusted? stretched? compressed?

Problem and Objectives

In order for DMI leaders to make responsible decisions in the 10 areas listed above, a new, expanded planning, management, and assessment system is needed within DMI. A number of internal position papers have already specified certain characteristics of this new system. However, the nature of the task requires skills and disciplinary qualifications not now available within DMI. Accordingly, outside help will be required in the further development of the system. The present need, thus, is for the systematic engagement of a number of outstanding planning, management, and assessment personnel to assist DMI leaders:

(1) In completing a background study which lays out the characteristics, needs, and opportunities of the new DMI planning, management, and assessment system.

(2) In preparing detailed specifications for the design of the new system.

(3) In designing two alternative planning and assessment systems for DMI, complete with detailed specifications for all needed instrumentation.

(4) In selecting or synthesizing the final DMI system.

(5) In completing pilot instrumentation according to the specifications.

(6) Orientation of DMI staff concerning the new system.

The present contract calls for only the first steps on this overall workplan, specifically, completion of the background study, preparation of specifications for the new system, and recruiting and orientating members of the design teams.

Task Areas, Task Groups, and Products

Figure 2 outlines a general strategy for the development of a new DMI planning and assessment system. The horizontal dimension of the chart identifies the major task areas and task groups within the strategy. The vertical dimension is a time line which has been divided into five major phases. It is reiterated that this initial proposal covers only the tasks and budget for Phase I, plus Step 9 which is included in Phase II. Moreover, this initial proposal is being submitted under the assumption that additional funds will be made available to The Ohio State University Research Foundation during August of 1971 for the completion of Phases II through V of the total project. The remainder of this section contains definitions of the task areas and task groups and a description of the work to be performed by the different task groups during each of the project phases.

The background study depicted in the left hand column will be devoted to a study of needs to be met by the new system, as well as opportunities that could be brought to bear on meeting these needs, and particular tasks which must be accomplished in operationalizing a new strategy.

The decision-maker column denotes functions to be performed by the group of persons who will make decisions about the adoption and implementation of a new system and a team of synthesizers to serve the former group in formulating and articulating decisions that will need to be made in the selection and implementation of the new approach. This team of synthesizers is conceived to include one person from the group of Office of Education personnel who will make decisions about the new

FIGURE 2

DESIGN FOR DEVELOPMENT OF A DMI EVALUATION SYSTEM

Start: June 15	Background Study for a new DMI Evaluation System	Decision Makers: Synthesizers (internal & external)	Decision Makers: OE Decision Makers	Generation and Evaluation of Alternative Evaluation Systems for DMI: Coordinator & Staff	Generation and Evaluation of Alternative Evaluation Systems for DMI: Advocate Teams	Generation and Evaluation of Alternative Evaluation Systems for DMI: Convergence Team	Advisory Group for the DMI Interim Evaluation System
June 15		1. Report #1: clarification of background evaluation questions (needs for new system, characteristics of present system)					8. Consultation as needed by the DMI staff regarding the implementation of their present evaluation system while a new one is under development
I	3. Report #2: completion of background evaluation design		2. Confirmation of background evaluation questions	4. Recruitment of Advocate & Convergence Teams			
	6. Implementation of the background evaluation	5. Review of background evaluation design					
Aug 15	7. Report #3: background evaluation findings						
Aug 16		9. Report #4: DMI eval. objectives & alternatives evaluation specifications					
II			10. Review, revision, & approval of DMI evaluation objectives & alternative evaluation specifications	11. Train Advocate & Convergence Teams	12. Study the background evaluation report, the DMI eval. objectives, & the alternatives eval. specification	13. Study the background evaluation report, the DMI eval. objectives, & the alternatives eval. specification	
Sep 15		14. Modification of Report #4					
Sep 16		16. Review the alternatives evaluation design		15. Report #5: Complete the alternatives evaluation design 17. Complete the training of the Advocate teams	18. Reports 6 & 7: Generate alternative evaluation system designs for DMI		
III				19. Evaluate the alternative eval. system designs for DMI 20. Report #8: Initial alternatives evaluation findings			
Nov. 1							
Nov. 2		21. Report #9: Working paper on the selection of an alternative evaluation system design					
IV			22. Reactions to working paper #9	23. Complete training & orientation for the Convergence team		24. Report #10: Convergence strategy for a DMI evaluation system	
Dec. 1				25. Report #11: Final Alternatives Evaluation Report			
Dec. 2		26. Report #12: Proposal for installation of the new DMI evaluation system					
V			27. Decisions regarding the installation of the new DMI evaluation system				
Dec. 30							

system as well as an outside person who qualifies as an educational statesman and a person who is highly knowledgeable of decision making and evaluation regarding DMI programs. It is suggested that a person such as Dr. Francis Chase serve in this latter capacity.

The fourth major task area is that of generation and evaluation of alternative planning and assessment systems for DMI. This area is to be manned by three subgroups.

The first is a study coordinator and staff. This team will structure and implement a study to generate and assess competing system alternatives for DMI. The team will include an overall coordinator, an information specialist to organize, store, and retrieve information needed in the study of alternative systems, a measurement and statistics specialist to assist in the data gathering and analysis activities, and a technical writer to assist in the writing up of alternative system strategies.

The second subgroup includes two advocate teams. These teams will be selected because they represent competing positions with respect to what kind of system should be generated to serve DMI purposes. Tentative lists of persons for the teams are:

Team A	Team B
Roald F. Campbell, Chairman	Henry M. Brickell, Chairman
Michael Scriven	Egon G. Guba
Robert E. Stake	William B. Michael
Gene V. Glass	John E. Seger
C. M. Lindvall	Howard O. Merriman

The third subgroup includes a convergence team. This team is to be composed of persons who represent DMI and evaluation and decision making in Labs and Centers. The purpose of this team is to review the competing alternative system strategies produced by each of the advocate teams and to generate a third strategy which may be an elaboration of one of the advocate team strategies, a completely new strategy, or a merging of the best features of the two competing strategies. A suggested list of members to serve on this team includes Charles Frye, David L. Clark, Arthur Lumsdaine, Robert Randall, and Walter Marks.

The last major column on the chart includes an advisory group to provide DMI with continuing assistance during the course of this study with respect to their ongoing activities. Proposed members of this group include Daniel L. Stufflebeam, J. Thomas Hastings, and Richard Jaeger.

Project Phases

The work of the above identified group is projected to occur during a six and one-half month period (June 28 through January 15). The specific tasks to be performed during the five phases are numbered consecutively through the master chart.

Phase One (two months)

The main purpose of Phase I is to determine the main needs which should be met by the new planning and assessment system, and to identify and assess opportunities which could be used by DMI in meeting these needs.

(1) The internal and external synthesizers will work with the project staff and with leaders of the design teams to clarify questions which should be addressed in the initial background study in order to identify needs and opportunities concerning development of the new system (Report No. 1).

(2) The DMI decision-making group will review and revise or extend, if necessary, the specifications for the background study and finally provide a confirmation of what is to be produced by the study.

(3) The team to perform the background study will produce Report No. 2, which is to be a completed design for conduct of the initial background study. This design must respond directly to the questions, constraints, and specifications identified in 1 and 2 above.

(4) At the same time that the decision makers and study team are clarifying questions and a design for the background study, the coordinator for the study to generate and assess alternative evaluation systems for DMI will recruit members for the advocate and convergence teams.

(5) The synthesizers for the decision-making group will review the design for the initial background study to insure that it does respond adequately to the decision makers' questions and specifications.

(6) The background study team will implement their design.

(7) The background study team will report their findings to the synthesizers and OE decision makers within the overall decision-making group (Report No. 3).

(8) At the same time that the preceding activities are ongoing, the special advisory panel mentioned in the right hand column of the master chart will work with DMI staff as needed to assist in the implementation of the present DMI system.

It is to be noted that during Phase I various participants in and audiences for the DMI evaluation system--Office of Education decision makers, experienced site visitors, members of the Lab and Center staffs, and others--will be surveyed systematically. Special consideration will be given to the principal DMI decision makers and others they may designate concerning their expectations from the new DMI assessment system.

The background study will be conducted in close coordination with the DMI staff and they may be assisted by such consultants as they choose.

Phase Two (one month)

The main purpose of Phase II is to write a set of specifications for the new DMI planning and assessment system and to have those specifications confirmed by the principal DMI decision makers.

(9) The team of internal and external synthesizers will prepare Report No. 4, which is to be a working paper on objectives to be achieved by the new DMI system and specifications to be followed in preparing alternative designs for such a system. This report is to respond to the findings produced by the initial background study (Report No. 3). The specifications will include a statement of the format in which subsequent designs are to be presented and criteria for evaluating the designs.

(10) The descriptions and specifications contained in Report No. 4 will be presented to DMI decision makers for their reactions. Refinement of the description and specifications will continue until DMI decision makers confirm clearly that they are satisfactory.

(14) The team of synthesizers will adjust Report No. 4 appropriately, given reactions by DMI decision makers.

(11) The coordinator of the study to generate and assess alternative systems for DMI will continue to train members of the advocate and convergence teams by providing them with Reports 1 through 4.

(12) and (13) Accordingly, the advocate and convergence teams will study information made available to them concerning the initial background study and DMI decisions based upon the study.

Phase Three (one and one-half months)

The main purpose of Phase III is to design and evaluate two alternative planning and assessment systems for DMI.

(15) The "advocate team" approach will be applied. Two teams of different disciplinary and theoretical composition will each design a system to meet the specifications prepared in Phase II. At this point Report No. 5, the study design for generating and assessing alternative advocate team reports, will be completed.

(16) This study design will be reviewed by the team of synthesizers to insure that the design responds appropriately to the objectives for the new DMI system and the specifications for generation of alternative assessment systems to meet those objectives, as given in Step 10 in Phase II.

(17) The coordinator of the study to generate and assess alternative DMI systems will complete the training of advocate teams so that they have a grasp of the information contained in Reports 1 through 5.

(18) The advocate teams will generate Reports Nos. 6 and 7. Each team will develop its system in relative isolation from the other team.

(19) The study team for the generation and evaluation of alternative DMI systems will coordinate a comprehensive evaluation of the alternative systems proposed in Reports 6 and 7. The main point of this step is to assess the extent to which the competing designs respond appropriately to DMI objectives and system specifications, as given in Step 10. In performing this evaluation, data will be gathered from DMI staff, principal DMI decision makers, representatives of the CEDaR group, and others which DMI decision makers may designate.

(20) Report No. 8, to contain an initial evaluation of the alternative systems, will be prepared and submitted to the team of synthesizers.

Phase Four (one month)

The main purpose of this phase is to obtain initial reactions by DMI decision makers to the two advocate team reports and to generate yet a third strategy which responds to the DMI decision maker reactions.

(21) Based upon Report No. 8 (initial findings concerning the relative strengths and weaknesses of the two competing DMI systems), the synthesis team will prepare Report No. 9, a working paper on the selection of one of the alternatives over the other.

(22) This working paper, along with Report No. 8, will be presented to the DMI decision makers for their initial reactions and suggestions.

(23) Based upon DMI decision maker reactions, the training for the members of the convergence team will be completed such that they have an adequate grasp of all nine reports to date.

(24) The convergence team will generate Report No. 10 which will provide a third strategy for a DMI planning and assessment system. It is to be recalled that the convergence team will include persons from within DMI and within Labs and Centers. This team may confirm the selection of one of the advocate reports and elaborate upon it, reject both reports and generate a third alternative, or combine what they consider to be the best features of both reports.

(25) Based upon the convergence team report (No. 10), the study team to generate and assess alternative systems will perform a final assessment of the three competing strategies as reflected in Reports 6 and 7 and will prepare the final study report. This report (No. 11) will be submitted to the synthesis team.

Phase Five (one month)

The main purpose of the final phase is to assist DMI decision makers to choose a system design and to make decisions concerning the installation of the new system.

(26) The synthesis team will prepare Report No. 12, which will be a proposal for the installation of the new DMI system. This final report is to be based upon the preceding eleven reports, and in effect is to suggest the decisions that need to be made by DMI, given the findings from the previous four stages, in installing a new system. In the performance of this task the synthesis team should feel free to call upon the assistance of any of those who have participated in the overall study up to this point.

(27) The final projected step calls for the DMI decision makers to formalize their decisions regarding the installation of the new DMI system and to proceed with the implementation of those decisions.

Exhibit A

Budget Breakout for Each of Five Phases

		2 mo. I	1 mo. II	1½ mo. III	1 mo. IV	1 mo. V	TOTAL
Direct Costs							
1.	Project Supervisor	442	221	329	221	221	1,434
2.	Projector Director	2,960	1,480	2,200	1,480	1,480	9,600
3.	Background Evaluator	2,000					2,000
4.	Alternatives Evaluator	1,500	1,000	1,500	1,000	1,000	6,000
5.	Information Specialist	750	500	750	500	500	3,000
6.	Technical Writer	620	310	450	310	310	2,000
7.	Measurement & Statistics Specialist	620	310	450	310	310	2,000
8.	Synthesizer	800	1,200		800	1,200	4,000
9.	Advocate Team Members		4,800	7,200			12,000
10.	Convergence Team Members		3,000		3,000		6,000
11.	Secretary	1,026	513	771	513	513	3,336
12.	Alternatives Evaluation Respondents			1,250			1,250
13.	Advisory Panel	2,624	200	154	86	86	3,150
	SUBTOTAL	13,342	13,534	15,054	8,220	5,620	55,770
Other Costs							
14.	Employee Services & Benefits	1,136	568	852	568	568	3,692
15.	Travel	3,046	1,523	2,285	1,523	1,523	9,900
16.	Office supplies, communications, etc.	246	123	185	123	123	800
17.	Per diem	1,136	568	850	568	568	3,690
18.	Conference Facilities			200	100		300
19.	Subcontract for Instrument Construction & Data Analysis	300		500		700	1,500
20.	Twelve reports	600	200	800	600	200	2,400
	SUBTOTAL	6,464	2,982	5,672	3,482	3,682	22,282
	TOTAL	19,806	16,516	20,726	11,702	9,302	78,052
21.	Total Subject to Indirect Costs	9,918	4,434	6,450	4,334	4,334	29,370
22.	Indirect Costs	4,634	2,025	3,013	2,025	2,025	13,722
23.	Funds Requested	24,440	18,541	23,739	13,727	11,327	91,774

Exhibit B

Full Term (6½ Months) Budget

DIRECT COSTS

1.	Project Supervisor	$1,434	
2.	Project Director	9,600	
3.	Background Evaluator	2,000	
4.	Alternatives Evaluator	6,000	
5.	Information Specialist	3,000	
6.	Technical Writer	2,000	
7.	Measurement & Statistics Specialist	2,000	
8.	Synthesizer	4,000	
9.	Advocate Team Members	12,000	
10.	Convergence Team Members	6,000	
11.	Secretary	3,336	
12.	Alternatives Evaluation Respondents	1,250	
13.	Advisory Panel	3,150	
	SUB TOTAL		$55,770

OTHER COSTS

14.	Employee Services & Benefits	3,692	
15.	Travel	9,900	
16.	Office supplies, communications, etc.	800	
17.	Per diem	3,690	
18.	Conference Facilities	300	
19.	Subcontract for Instrument Construction and Data Analysis	1,500	
20.	Twelve reports @ $200	2,400	
	SUB TOTAL		22,282
	TOTAL		78,052
21.	Total Subject to Indirect Costs	29,370	
22.	Indirect Costs		13,722
23.	Funds Requested		91,774

Exhibit C

Budget Notes

1.	Project Supervisor (12 month Salary 26,520 = 2,210 monthly, 10% time for 6½ months)	$1,434
2.	Project Director (12 month Salary 17,724 = 1,477 monthly, full time for 6½ months)	9,600
3.	Background Evaluator (12 month Salary 12,000 = 1,000 monthly, full time for 2 months)	2,000
4.	Alternatives Evaluator (12 month Salary 12,000 = 1,000 monthly, full time for 6 months)	6,000
5.	Information Specialist (12 month Salary 12,000 = 1,000 monthly, half time for 6 months)	3,000
6.	Technical Writer (12 month Salary 12,000 = 1,000 monthly, 30% time for 6½ months)	2,000
7.	Measurement and Statistics Specialist (12 month Salary 12,000 = 1,000 monthly, 30% time for 6½ months)	2,000
8.	Synthesizer (daily 200, 20 days)	4,000
9.	Advocate Team members 10 (daily 150, 8 days)	12,000
10.	Convergence Team members, 5 (daily 150, 8 days)	6,000
11.	Secretary (12 month Salary 6,156 = 513 monthly, full time for 6½ months)	3,336

12.	Alternatives Evaluation Respondents (50 @ 25)	$1,250	
13.	Advisory panel for Interim Evaluation (daily 150, 3 persons, 7 days each)	3,150	
	SUB TOTAL		55,770
14.	Employee Services and Benefits (State employees retirement, 12.9% for 1, 2, 3, 4, 5, 6, 7 10% for 11)	3,692	
15.	Travel (15 trips by staff @ 100, 15 trips by advocate and convergence teams and 6 trips by synthesizer @ 200 21 trips by advisory panel for interim evaluation system @ 200)	9,900	
16.	Office supplies, reproduction, communications, etc.	800	
17.	Per diem (123 days @ 30)	3,690	
18.	Conference facilities	300	
19.	Subcontract for instrument construction and data analysis	1,500	
20.	Twelve reports @ 200	2,400	
	SUB TOTAL - Indirect Costs		22,282
22.	Indirect Costs (46.72% of 1, 2, 3, 4, 5, 6, 7, 11 for on-campus personnel)	13,722	
23.	Funds Requested		91,774